

Water/NPDES Compliance Evaluation Inspection

**The John F. Kennedy Center for the Performing Arts
2700 F Street NW,
Washington, DC 20566**

NPDES Permit No. DC0000248

July 5 and September 7, 2016

DOEE Representatives: Robert Burnett
Environmental Protection Specialist

Isaac Kelley
Environmental Protection Specialist

**Kennedy Center
Representatives:**

Rodney Cherry
Facility Manager

Audie L. Willingham
MEP Supervisor

Alexander Mensah
Mechanic

1. Introduction

On July 5th and September 7th 2016, inspectors from the Water Quality Division (WQD) of the Department of Energy and Environment (DOEE) conducted a National Pollutant Discharge Elimination System (NPDES) Compliance Evaluation Inspection (CEI) at the John F. Kennedy Center for the Performing Arts (the facility). The July inspection covered the facilities operations, maintenance, and outfalls and the September visit consisted of a document review. The facility was inspected to determine the accuracy and reliability of the permittee's self-monitoring program/data and compliance with their NPDES permit. NPDES program and permits derive authority from the Clean Water Act (CWA).

DOEE Inspectors Robert Burnett and Isaac Kelley reviewed records, interviewed site representatives, conducted an inspection tour of the facility, and completed EPA Form 3560-3 Water Compliance Inspection Report. The facility was represented by Audie Willingham, the MEP Supervisor, and Alexander Mensah, the facility mechanic on July 5th. The facility representative on September 7th was Rodney Cherry, Facility Manager. The weather at the time of inspection was a hot and humid with a temperature of approximately 85° F on July 5th and 90° F on September 7th.

2. Facility Description

The John F. Kennedy Center for the Performing Arts is located along the Potomac River just north of the Roosevelt Memorial Bridge (**Figure 1**). The facility uses raw water from the Potomac River as non-contact cooling water for its air conditioning (A/C) system which is comprised of an open loop condenser and a closed loop chiller. The open loop condenser system uses water from the Potomac River to remove heat from the closed loop chiller system and discharges it back to the Potomac River. The chiller system consists of four chiller units and one plate and frame heat transfer system. The facility typically operates two chillers and the plate and frame system and keeps two chillers as backup. The current permit contains effluent limits for temperature and pH. The facility's A/C system is maintained and operated 24 hours per day from May through September of each year, and as needed during the remainder of the year. The volume of water used is dependent on the ambient outside air temperature.

The facility's water intake point is located in the Potomac River and extends at an angle 40 feet out and 20 feet down to the middle of the river bed. The end of the pipe is equipped with a bar screen as a first measure to prevent "large" debris from entering the intake pipe. There is a monitoring station located at the intake point of the Condenser Pump Room. Samples are collected at the intake point from within the settling chamber via a dip bucket and temperature and pH are measured using a handheld probe.

The influent enters a screening/filtration process which consists of an initial settling chamber, a stationary screen to capture "large" debris, a diversion wall that directs influent into one of two mud walls each containing one traveling screen to capture "smaller" debris, and a second set of mud walls. The influent is then combined into a second settling chamber where it is pumped through in-line filtration that captures debris and particulates larger than approximately 2cm.

The filtered non-contact cooling water flowing from the screening/filtration system is pumped to the mechanical room where it is used to cool one of four chiller units or the plate and frame system. After use, the water is typically returned to the Potomac River via Outfall No. 001. An automated thermally activated valve on the discharge pipe (**Photo 1**) redirects cooling water to the intake settling chamber and re-circulated through the system to meet the maximum permitted temperature of 32.2°C (89.9°F) prior to discharge. Although the permit also requires the cooling water effluent to be less than 2.8°C (5.04°F) above the receiving water's ambient temperature; the automated system is not designed to recirculate the cooling water if this condition is not met. Facility representatives stated the plate and frame heat transfer system reduces the need for the recirculation system, but that the system is maintained as a backup.

3. Records and Reports

Records and reports associated with the permit are maintained properly at the site and the items reviewed during the inspection included Discharge Monitoring Reports (DMRs) and sampling data sheets. DMR's from May 2014 to July 2016 were reviewed. The facility maintains a Stormwater Pollution Prevention Plan (SWPPP) for its expansion project (**Photo 2**).

The DMR review included a comparison of reported monitoring results versus requirements and limitations contained within the permit. pH and temperature difference was not properly reported until September 2014. The influent temperature is still not recorded in the DMR information which calls into question the accuracy of the calculation for temperature difference (**Photo 3**). The tables below contain all pH and temperature effluent violations during the reporting period.

Monitoring Period	Permit Limit	Measured Value	
06/01/2014 – 06/30/2014	32.2°C	34.5 °C	Analog
07/01/2014 – 07/31/2014	32.2°C	35.7 °C	Analog
09/01/2014 – 09/30/2014	32.2°C	32.36 °C	Recorder
08/01/2015 – 08/31/2015	32.2°C	33.3 °C	Recorder
09/01/2015 – 09/30/2015	32.2°C	36 °C	Recorder
07/01/2016 – 07/31/2016	32.2°C	32.4 °C	Recorder

Monitoring Period	Permit Limit	Measured Value	
11/01/2014 – 11/30/2014	8.5	8.7	Recorder
12/01/2014 – 12/31/2014	8.5	8.65*	Recorder
01/01/2015 – 01/31/2015	8.5	8.79	Recorder
05/01/2015 – 05/31/2015	8.5	8.9*	Recorder
06/01/2015 – 06/30/2015	8.5	8.9*	Recorder
10/01/2015 – 10/31/2015	8.5	8.79	Recorder
07/01/2016 – 07/31/2016	8.5	8.8	Recorder

4. Permit Verification

Non-contact cooling water discharged from facility Outfall 001 to the Potomac River is regulated by NPDES Permit No. DC0000248 (the Permit). The permit issued to the facility became effective on May 30th 2013 and expires June 5th 2018.

5. Operation and Maintenance

The plumbing (for both coolant and cooling water), screens, filters, and A/C units appeared to be in good working order. The inspectors did not see any leaks or spills at any of the unit processes involved in handling or discharging cooling water.

Facility representative stated that the process for cleaning filters has been changed. Filters are backwashed into the influent collection point and sediment is allowed to settle out. The sediment and filters are reportedly manually cleaned by a contractor (Magnolia). The sediment is collected in buckets and then disposed of by the contractor. During the 2016 inspection buckets of collected materials (**Photos 4 and 5**) remained onsite, facility representatives could not provide a plan for when or how this material was going to be disposed. Following the inspection, the facility provided documentation showing Magnolia last was contracted to perform maintenance in August 2015, and is contracted to perform maintenance again in August 2017 (**Photos 6 and 7**). Facility representatives stated in post-inspection discussions that the Pit was only recommissioned in 2015 and they are uncertain what the required scheduling for cleaning will become.

6. Compliance Schedules

Within one (1) year of the effective date of the initial permit, the permittee was to prepare and submit to EPA and DOEE a report, prepared by a qualified engineer or engineering firm, that shall (a) evaluate the reasons for recent and previous exceedances of temperature and (b) recommend corrective action to avoid future exceedances. The thermal plume study was completed in October 2013 and submitted to DOEE and EPA Region 3. The study found temperatures mixed and reverted to ambient within approximately 50 ft. of the discharge. It did not include any recommendations to avoid future exceedances.

7. Self-Monitoring Program

The facility is conducting its self-monitoring program in accordance with the Permit Part II, Section C.3, which requires that monitoring be conducted according to procedures approved under 40 CFR 136.

7.1 Sampling

The facility does not have an on-site laboratory and does not collect samples for laboratory analytical testing. The permit requires the facility to monitor flow, temperature, and pH only. Monitoring is conducted by onsite monitoring equipment.

The effluent monitoring station is located in the mechanical room on the effluent discharge pipe. The effluent discharge pipe carries water from all four chiller units and the plate and frame system to Outfall 001. Monitoring is accomplished through an in-line meter and data logger that measures pH and temperature (**Photos 8, 9, and 10**). A new system was installed following the 2014 inspection and was functioning properly during the inspection. The meter is manufactured by ECOLAB® and was installed by Bond Water Technologies, Inc. Bond Water Technologies, Inc. is contracted to conduct routine maintenance, download data, and calibrate the effluent monitoring equipment. Facility representatives stated hard copies of the data logs downloaded during calibration are maintained in the facility's NPDES files but could not provide the

documents. During the 2016 inspection, the facility did provide a printout of the September calibration (**Photo 11**).

The influent monitoring station is located in the condenser room and is situated above an opening in the initial settling chamber at the influent inlet (**Photos 12 and 13**). Water from the intake point is collected via a dip bucket and temperature and pH are measured using a handheld probe manufactured by HANNA® (**Photo 14**). A logbook for recording measurements is located adjacent to the monitoring station (**Photos 15 and 16**).

The 2013 permit has reduced the necessary number of pH and temperature measurements required and the facility appears to be adequately collecting data. However the facility does not appear to be reporting influent temperatures properly in the DMRs as no values are reported. This places uncertainty on the temperature change calculations provided.

7.2 Flow Measurement

Flow measurements are collected via the Ecolab system which is part of the pH and temperature monitoring system. The program keeps real time measurements of outflows and intakes which can be monitored via computer (**Photo 17**).

7.3 Laboratory

The facilities NPDES permit does not require samples that need laboratory evaluation. The pH and temperature data is maintained and collected by Bond Technologies.

8. Effluent and Receiving Waters

The receiving waters in the vicinity of Outfall 001 were observed to be free from visible contaminants such as foam, solids, oil sheens, or grease (**Photo 18**). The outfall is submerged in the middle of the river and is not directly visible.

9. Past and Current Inspection Findings

9.1 2011 Inspection Findings

No Findings

9.2 2014 Inspection Findings

- A0012 – Numeric Effluent Violations (Temperature; 6/2013, 7/2013, 8/2013, 9/2013)
- C0015 – frequency of sampling violation, (pH DMR omissions; 1/2013, 11/2013, 12/2013, and 2/2014).
- A0011 – Unapproved bypass (discharge of sludge and sediment during filter backwash).
- C0011 – Failure to monitor for non-toxicity requirements (Influent temperature is not monitored).

9.3 2016 Inspection Findings

9.3.1 A0012 - Numeric effluent violations

Part I. Effluent Limitations and Monitoring Requirements

pH shall not be less than 6.0 standard units or greater than 8.5 standard units.

In accordance with DC WQS; not to exceed maximum daily value of 32.2⁰ C and 2.8⁰ C above ambient temperature at point of discharge.

The facility had 6 temperature (June, July, and September 2014; August and September 2015; July 2016) and 7 pH violations (November and December 2014; January, May, and June 2015; October 2015; and July 2016). However, 3 of the pH violations (December 2014; May and June 2015) occurred when influent measurements were also above pH requirements.

9.3.2 C0011 - Failure to monitor for non-toxicity requirements

Part III. Special Conditions

1. Influent and Effluent Monitoring

The permittee shall monitor the Potomac River water influent at the intake point for pH and temperature on the same days that samples for effluent monitoring for these parameters are taken, as required by Paragraph I.A. herein. The permittee shall take the readings for influent and effluent no greater than two hours apart.

The facility has not reported influent monitoring temperatures used for regulatory calculations on DMRs providing no proof that the influent temperature is being collected properly in accordance with the permit or that temperature changes values are being properly calculated.

9.3.3 SEV B0020 – Improper Operation and Maintenance

Part II. Standard Conditions for NPDES Permits

Section B. Operation and Maintenance of Pollution Controls

1. Proper Operation and Maintenance

Proper operation and maintenance includes: effective performance; adequate funding; adequate operator staffing and training; and adequate laboratory and process controls, including appropriate quality assurance procedures.

The facility either does not have, or cannot provide proof of, an adequate training program for operators. Facility staff stated that they were between program managers and a program had not been put into effect. However, if an adequate program had been in place, then the changing of a facility manager or other staff should not render the training program non-existent.

10. Conclusions

The facility continues to have effluent violation issues. While the temperature plume study appeared to show effects of increased temperatures limited to within 50 feet of the outfall, there is no quantification of the potential effects of repeated pH violations. The system for remediating water for temperature and pH may need to be revisited to increase its efficacy.

The facility has failed to make changes instructed by Inspectors during previous inspections or has failed to provide documentation proving that these changes were made. This includes update

DMR reporting to include influent temperature measurements and providing adequate documentation of a training program for operators.

Attachments:

- A. Water Compliance Inspection Report - EPA Form 3560-3.
- B. Photograph log



United States Environmental Protection Agency
Washington, D.C. 20460
Water Compliance Inspection Report

Section A: National Data System Coding (i.e. PCS)

Transaction Code NPDES yr/mo/day Inspection Type Inspector FacType
1 N 2 3 DC00000248 11 12 16/07/05 17 18 C 19 S 20 2
Remarks
21 66
Inspection Work Days Facility Self-Monitoring Evaluation Rating B1 QA -----Reserved-----
67 5 69 70 4 71 N 72 N 73 74 75 80

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) The John F. Kennedy Center for the Performing Arts 2700 F Street, N.W. Washington, DC 20566	Entry Time/Date 10:45 AM 05 July 2016	Permit Effective Date 06 June 2013
	Exit Time/Date 12:30 AM 05 July 2016	Permit Expiration Date 05 June 2018
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) Audie Willingham, MEP Supervisor Alexander Meusah, Facility Mechanic	Other Facility Data (e.g., ISC NAICS, and other descriptive information)	
Name, Address of Responsible Official/Title/Phone and Fax Number Rodney Cherry, Director of Facility Services (202) 416-7933	Contacted <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	




Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

<input checked="" type="checkbox"/> Permit	<input checked="" type="checkbox"/> Self-Monitoring Program	<input type="checkbox"/> Pretreatment	<input type="checkbox"/> MS4
<input checked="" type="checkbox"/> Records/Reports	<input checked="" type="checkbox"/> Compliance Schedules	<input checked="" type="checkbox"/> Pollution Prevention	
<input checked="" type="checkbox"/> Facility Site Review	<input type="checkbox"/> Laboratory	<input checked="" type="checkbox"/> Stormwater	
<input checked="" type="checkbox"/> Effluent/Receiving Waters	<input checked="" type="checkbox"/> Operations & Maintenance	<input type="checkbox"/> Combined Sewer Overflow	
<input checked="" type="checkbox"/> Flow Measurement	<input checked="" type="checkbox"/> Sludge Handling/Disposal	<input type="checkbox"/> Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments

(Attach additional sheets of narrative and checklists, including Single Event Violation codes, as necessary)

SEV Codes	SEV Description
A0012	Numeric Effluent Violations (10*)
B0020	Improper Operation and Maintenance (*)
C0011	Failure to Monitor for Non-Toxicity Requirements

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers	Date
Robert Burnett 	District Department of the Environment Water Quality Division – 202.535.1725	12/01/16
Isaac Kelley 	District Department of the Environment Water Quality Division – 202.535.2691	12.01.16
Signature of Management Q/A Reviewer Joshua Rodriguez 	Agency/Office/Phone and Fax Number Water Quality Division – 202.535.1025	12.01.16

Comments

* See narrative document for full list and explanation of SEV violations.

		PERMIT NO. DC0000248		
SECTIONS F THRU L: COMPLETE ON ALL INSPECTIONS, AS APPROPRIATE. N/A = NOT APPLICABLE				
SECTION F - FACILITY AND PERMIT BACKGROUND				
ADDRESS OF PERMITTEE IF DIFFERENT FROM FACILITY (Including City, County and ZIP code)		DATE OF LAST PREVIOUS INVESTIGATION BY EPA/STATE 27 May 2014		
		FINDINGS A0012 Numeric Effluent Violation (Outfall 001E on 15 April 2014) B0020 Improper Operation and Maintenance (BMP Maintenance)		
SECTION G - RECORDS AND REPORTS				
RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
DETAILS:				
(a) ADEQUATE RECORDS MAINTAINED OF:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
SAMPLING DATE, TIME, EXACT LOCATION		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
ANALYSES DATES, TIMES		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
INDIVIDUAL PERFORMING ANALYSIS		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
ANALYTICAL METHODS/TECHNIQUES USED		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
ANALYTICAL RESULTS (e.g., consistent with self-monitoring report data)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(b) MONITORING RECORDS (e.g., flow, pH, D.O., etc.) MAINTAINED FOR A MINIMUM OF THREE YEARS INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS (e.g., continuous monitoring instrumentation, calibration and maintenance records)		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
(c) LAB EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS KEPT		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(d) FACILITY OPERATING RECORDS KEPT INCLUDING LOGS FOR EACH TREATMENT UNIT		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(e) QUALITY ASSURANCE RECORDS KEPT		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(f) RECORDS MAINTAINED OF MAJOR CONTRIBUTING INDUSTRIES (and their compliance status) USING PUBLICLY OWNED TREATMENT WORKS		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
SECTION H - PERMIT VERIFICATION				
INSPECTION OBSERVATIONS VERIFY THE PERMIT.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
DETAILS:				
(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(b) FACILITY IS AS DESCRIBED IN PERMIT.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(c) PRINCIPAL PRODUCT(S) AND PRODUCTION RATES CONFORM WITH THOSE SET FORTH IN PERMIT APPLICATION.		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(d) TREATMENT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(e) NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(f) ACCURATE RECORDS OF RAW WATER VOLUME MAINTAINED		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(g) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(h) CORRECT NAME AND LOCATION OF RECEIVING WATER		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(i) ALL DISCHARGES ARE PERMITTED		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Comments				

		PERMIT NO. DC0000248	
SECTION I - OPERATION AND MAINTENANCE			
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
DETAILS:			
(a) STANDBY POWER OR OTHER EQUIVALENT PROVISIONS PROVIDED.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(b) ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(c) REPORTS ON ALTERNATE SOURCE OF POWER SENT TO EPA/STATE AS REQUIRED BY PERMIT.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(d) SLUDGES AND SOLIDS ADEQUATELY DISPOSED.	<input checked="" type="checkbox"/> Yes ¹	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(e) ALL TREATMENT UNITS IN SERVICE.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(f) CONSULTING ENGINEER RETAINED OR AVAILABLE FOR CONSULTATION ON OPERATION AND MAINTENANCE PROBLEMS.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(g) QUALIFIED OPERATING STAFF PROVIDED.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(h) ESTABLISHED PROCEDURES AVAILABLE FOR TRAINING NEW OPERATORS.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
(i) FILES MAINTAINED ON SPARE PARTS INVENTORY, MAJOR EQUIPMENT SPECIFICATIONS, AND PARTS AND EQUIPMENT SUPPLIERS.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(j) INSTRUCTIONS FILES KEPT FOR OPERATION AND MAINTENANCE OF EACH ITEM OF MAJOR EQUIPMENT.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(k) OPERATION AND MAINTENANCE MANUAL MAINTAINED.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(l) SPCC PLAN AVAILABLE.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(m) REGULATORY AGENCY NOTIFIED OF BY-PASSING. (Dates _____)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(n) ANY BY-PASSING SINCE LAST INSPECTION.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
(o) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
SECTION J - COMPLIANCE SCHEDULES			
PERMITTEE IS MEETING COMPLIANCE SCHEDULE.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
CHECK APPROPRIATE PHASE(S):			
<input type="checkbox"/> (a) THE PERMITTEE HAS OBTAINED THE NECESSARY APPROVALS FROM THE APPROPRIATE AUTHORITIES TO BEGIN CONSTRUCTION.			
<input type="checkbox"/> (b) PROPER ARRANGEMENT HAS BEEN MADE FOR FINANCING (mortgage commitments, grants, etc.).			
<input type="checkbox"/> (c) CONTRACTS FOR ENGINEERING SERVICES HAVE BEEN EXECUTED.			
<input type="checkbox"/> (d) DESIGN PLANS AND SPECIFICATIONS HAVE BEEN COMPLETED.			
<input type="checkbox"/> (e) CONSTRUCTION HAS COMMENCED.			
<input type="checkbox"/> (f) CONSTRUCTION AND/OR EQUIPMENT ACQUISITION IS ON SCHEDULE. \ (g) CONSTRUCTION HAS BEEN COMPLETED.			
<input type="checkbox"/> (h) START-UP HAS COMMENCED.			
<input type="checkbox"/> (i) THE PERMITTEE HAS REQUESTED AN EXTENSION OF TIME.			
SECTION K - SELF-MONITORING PROGRAM			
PART 1 - FLOW MEASUREMENT			
PERMITTEE FLOW MEASUREMENT MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
DETAILS:			
(a) PRIMARY MEASURING DEVICE PROPERLY INSTALLED.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
TYPE OF DEVICE:			
<input type="checkbox"/> WEIR <input type="checkbox"/> PARSHALL FLUME <input type="checkbox"/> MAGMETER <input type="checkbox"/> VENTURI METER <input type="checkbox"/> OTHER (Specify _____)			
(b) CALIBRATION FREQUENCY ADEQUATE. (Date of last calibration __)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(c) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED AND MAINTAINED.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(d) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(e) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOW RATES.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

				PERMIT NO. DC0000248
PART 2 - SAMPLING				
PERMITTEE SAMPLING MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
DETAILS:				
(a) LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(c) PERMITTEE IS USING METHOD OF SAMPLE COLLECTION REQUIRED BY PERMIT.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
IF NO,	<input type="checkbox"/> GRAB	<input type="checkbox"/> MANUAL COMPOSITE	<input type="checkbox"/> AUTOMATIC COMPOSITE	FREQUENCY
(d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE.		<input checked="" type="checkbox"/> Yes ¹	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(i) SAMPLES REFRIGERATED DURING COMPOSITING		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(ii) PROPER PRESERVATION TECHNIQUES USED		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(iii) FLOW PROPORTIONED SAMPLES OBTAINED WHERE REQUIRED BY PERMIT		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(iv) SAMPLE HOLDING TIMES PRIOR TO ANALYSES IN CONFORMANCE WITH 40CFR136.3		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(e) MONITORING AND ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
(f) IF (e) IS YES, RESULTS ARE REPORTED IN PERMITTEE'S SELF-MONITORING REPORT.		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
PART 3 - LABORATORY				
PERMITTEE LABORATORY PROCEDURES MEET THE REQUIREMENTS AND INTENT OF THE PERMIT		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
DETAILS:				
(a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED. (40 CFR 136.3)		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(c) PARAMETERS OTHER THAN THOSE REQUIRED BY THE PERMIT ARE ANALYZED.		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(d) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(e) QUALITY CONTROL PROCEDURES USED.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(f) DUPLICATE SAMPLES ARE ANALYZED _____ % OF TIME.		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(g) SPIKED SAMPLES ARE USED _____ % OF TIME.		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
(h) COMMERCIAL LABORATORY USED.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
(i) COMMERCIAL LABORATORY STATE CERTIFIED.		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
LAB NAME <u>Bond Water Technologies</u>				
LAB ADDRESS <u>630 E. Diamond Avenue, Gaithersburg, MD 20877</u>				
Tel.:				
Comments:				
1. The facility has a contractor responsible for cleaning the screens and disposing of waste materials, however, a number of 5 gallon buckets containing dredged material remained on-site and the facility had no plan for disposal.				
2. The facility is reporting the change in temperature between influent and effluent on the NPDES permit, but there is no record of the influent temperature to confirm this data and no proof of how this number is being calculated.				

						PERMIT NO. DC0000248	
SECTION L - EFFLUENT/RECEIVING WATER OBSERVATIONS (Further explanation attached _____)							
OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOLIDS	COLOR	OTHER
001	None	None	None	None	None	None	None

(Sections M and N: Complete as appropriate for sampling inspections)

SECTION M - SAMPLING INSPECTION PROCEDURES AND OBSERVATIONS (Further explanation attached _____.)							
☐ GRAB SAMPLES OBTAINED ☐ COMPOSITE OBTAINED ☐ FLOW PROPORTIONED SAMPLE ☐ AUTOMATIC SAMPLER USED ☐ SAMPLE SPLIT WITH PERMITTEE ☐ CHAIN OF CUSTODY EMPLOYED ☐ SAMPLE OBTAINED FROM FACILITY'S SAMPLING DEVICE COMPOSITING FREQUENCY _____. PRESERVATION _____. SAMPLE REFRIGERATED DURING COMPOSITING: ☐ YES ☐ NO ☒ N/A SAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE: ☐ YES ☐ NO ☒ N/A							
SECTION N - ANALYTICAL RESULTS (Attach report if necessary)							

Water/NPDES Compliance Evaluation Inspection
The John F. Kennedy Center for the Performing Arts
2700 F Street NW,
Washington, DC 20566
NPDES Permit No. DC0000248

Inspectors: Robert Burnett and Isaac Kelly District Department of Energy and the Environment
Inspection Dates: July 5 and September 7, 2016

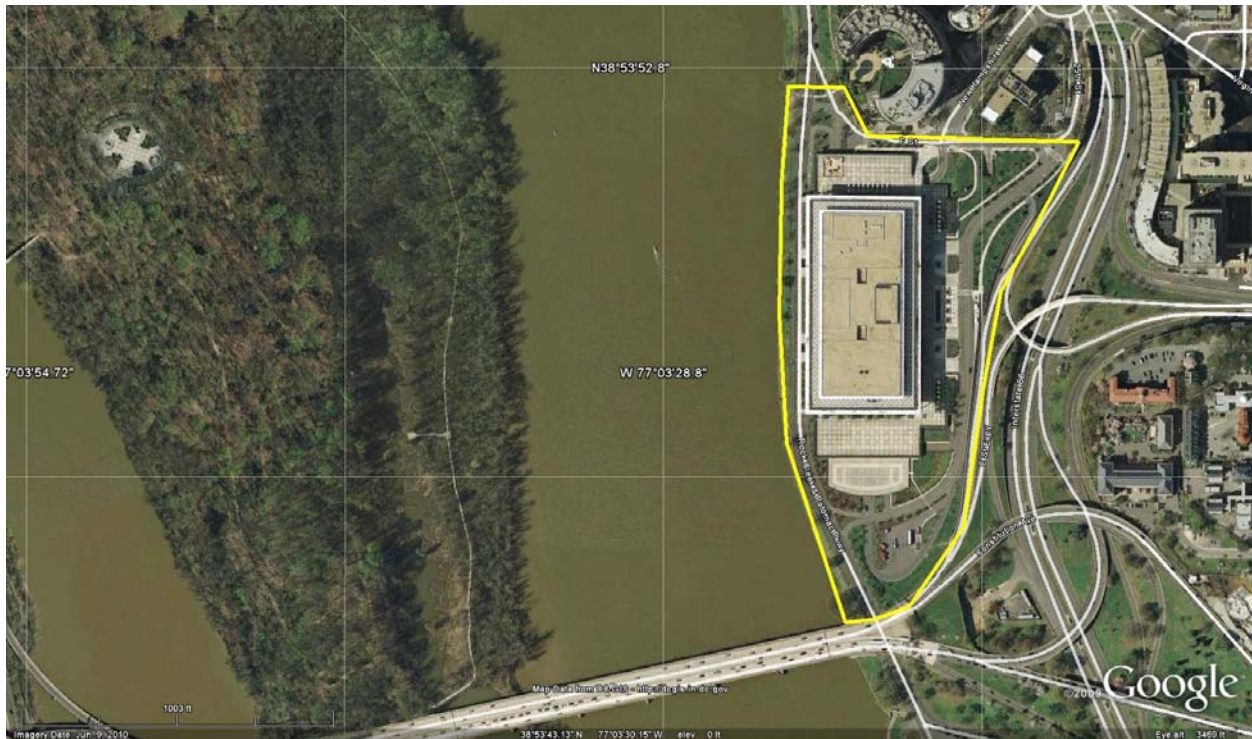


Figure 1. The John F. Kennedy Center for the Performing Arts located at 2700 F Street NW, Washington, DC 20566
Source: Google Earth DC.



Photo 1. Temperature bypass valve

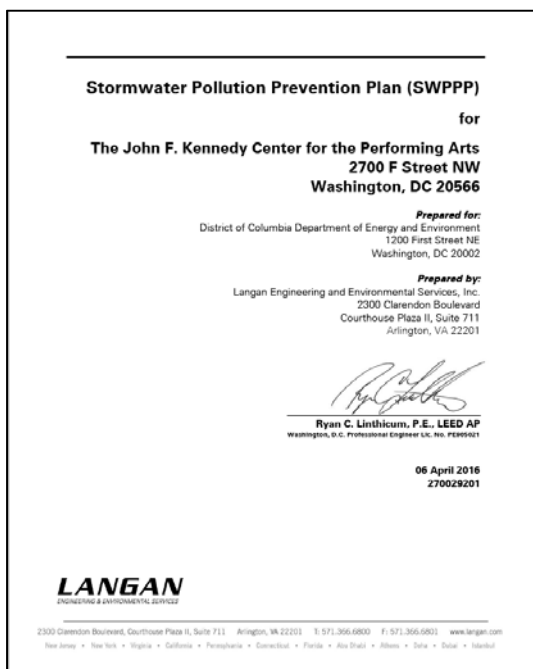


Photo 2. SWPPP for Kennedy Center Expansion Construction

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if
NAME: JFK CENTER FOR PERFORMING ARTS
ADDRESS: 2700 F STREET, NW
WASHINGTON, DC 20566
FACILITY: JFK CENTER FOR PERFORMING ARTS
LOCATION: 2700 F STREET, NW
WASHINGTON, DC 20566
ATTN: DIRECTOR, FACILITY SERVICES

DC0000248	001-A
PERMIT NUMBER	DISCHARGE NUMBER
MONITORING PERIOD	
MM/DD/YYYY	MM/DD/YYYY
07/01/2016	07/31/2016

DMR Mailing ZIP CODE: 20566
MINOR

NON-CONTACT COOLING WATER ONLY
External Outfall

No Discharge ☐

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Temperature, water deg. centigrade	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	32.4	deg C		Daily	Recorder
00010 I O Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	32.2 DAILY MX	deg C		Daily	Recorder (auto)
pH	SAMPLE MEASUREMENT	*****	*****	*****	7.2	*****	8.8	SU		2xmonth	Grab
00400 I O Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	8.5 MAXIMUM	SU		Twice per Month	GRAB
pH	SAMPLE MEASUREMENT	*****	*****	*****	7.74	*****	8.95	SU		2xmonth	Grab
00400 II O Industrial Influent	PERMIT REQUIREMENT	*****	*****	*****	6 MINIMUM	*****	8.5 MAXIMUM	SU		Twice per Month	GRAB
Flow, in conduit or thru treatment plant	SAMPLE MEASUREMENT	3,200	*****	gal/min	*****	*****	*****	*****		Daily	Measrd
50050 I O Effluent Gross	PERMIT REQUIREMENT	Reg. Mon. DAILY AV	*****	gal/min	*****	*****	*****	*****		Daily	MEASRD
Temp. difference, summer (deg. C)	SAMPLE MEASUREMENT	*****	*****	*****	*****	*****	-5.37	deg C		Daily	Recorder
81389 I O Effluent Gross	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	2.8 DAILY MX	deg C		Daily	Recorder (auto)

The ambient temperature was 100 deg F (37.77 deg C). Note also that the influent pH was recorded as 8.95 SU.

RECEIVED
9-3-2016

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	DATE
Carlos Elias/VP, Facilities			202.416.7914	9-3-2016
TYPED OR PRINTED			AREA Code NUMBER	MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
TEMP: NOT TO EXCEED A MAX DAILY VALUE OF 32.2 DEGREES CENTIGRADE AND 2.8 DEGREES CENTIGRADE ABOVE AMBIENT TEMP AT POINT OF DISCHARGE. FLOW AND TEMP FROM MAY 1 THRU OCTOBER 31 SHALL BE REPORTED. IF NO DISCHARGE PLEASE INDICATE.

Photo 3. Kennedy Center DMR; note there is no entry for Influent temperature and no indication of what value is utilized to calculate the change in temperature between influent and effluent



Photos 4 and 5. Debris collected from winter cleaning of filter uncovered and sitting onsite


Accounting Department: 600 Gallatin St., NE Washington, DC 20017 phone: 202-829-8510 fax: 202-529-0266		INVOICE
		Invoice No.: 104448 Invoice Date: 08/31/2015 Client: 521862 Site: 521862 Page: 1 of 1
THE JOHN F. KENNEDY CENTER 2700 F STREET, NW WASHINGTON DC 20566-0003	Service Location The John F. Kennedy Center 2700 F Street, NW Washington DC 20566	
Work Order Id: 203824 Completion Date: 08/18/2015	P.O. #: JFK15PO123 Job Id: S-521862	
Work Requested: Pump contents from condenser water tank. See attached proposal for job specifics. *** Prevailing Wage *** \$9,689.00 per day/\$19,378.00 Total		
Work Performed: *Completed Pumping & Cleaning Services As Per Contract: 08/17-08/18: *Pumped debris, sludge & sediment from all four chambers of condenser water tank *Power washed all internal surfaces of each of the four tanks *Disposed of waste *Job complete		
INVOICE TOTAL		\$19,378.00
NET 30 DAYS		
For your convenience, you can now pay your invoice online at: http://www.magnoliaplumbing.com/pay-bill-online/		
Our office locations: 600 Gallatin St. NE Washington, DC 20017	728 MD Rte 3 North Gambrills, MD 21054	13400 Mid Atlantic Blvd Laurel, MD 20708

Photo 6. Magnolia contract to pump and clean the condenser water tank in 2015.


 <p>MAGNOLIA PLUMBING, INC. 600 Gallatin Street, NE WASHINGTON, DC 20017</p> <p>Phone: (202) 829-8510 ext.1533 Fax: (240) 295-5827 Email: JStairs@Magnolia-Companies.com</p>		<p>Page 2 of 2</p> <p align="center">PROPOSAL</p>	
<p>QUOTE #184-2015</p>		<p>DATE July 29, 2015</p>	
<p>BILL TO:</p> <p>The Kennedy Center 2700 F Street, NW Washington, DC 20566-0001 Attention: David McKinney - Director Operation & Maintenance Email: damckinney@kennedy-center.org Email: rhkee@kennedy-center.org</p>		<p>FAX (202) 416-7945</p> <p>JOB LOCATION: SAME</p> <p>OFFICE PHONE (202) 416-7938</p> <p>CELL PHONE (202) 437-7956</p>	
<p align="center">Exhibit A - Scope of Work Description</p> <p>CONDENSER WATER TANK - PUMPING & CLEANING</p> <p>We herby propose to furnish the necessary labor, material and equipment to complete the following scope of work:</p> <ol style="list-style-type: none"> 1) Kennedy Center operation will be responsible for the insolation of the condenser water tank inlet lines from the Potomac River and the dewatering of each of the (4) four, chambers which construct the entire tank. 2) Remove by pumping the debris, sludge and sediment from each of the (4) four, chambers which construct the condenser water intake tank. 3) Using a high pressure water jet to power wash all of the internal surfaces of each of the four tanks. 4) Haul all of the contents to an approved dump facility and provide the manifest documentation to the owner that the contents were disposed of properly (if requested). 5) The price includes all dump fees associated with the hauling of the contents from the job site location to an approved dump facility. 6) Work shall include all confined space entry equipment per O.S.H.A. 29CFR1910.146. 7) All work shall be scheduled with Nick Kee and performed after normal working hours. OVERTIME. 8) The cost for the scope of work as listed above is \$9,689.00, per night. The estimated amount of days to complete the work is 6 nights. <p>NOTE Magnolia Plumbing, Inc. will need to supply 700' of 4" pump hose to reach the condenser water tank from the roadway.</p>			

Photo 7. 2017 Scope of work for tank clean out.



Photo 8. New Effluent pH and Temperature Monitor. Serviced and read by Bond technologies which supplies monthly reports to the facility.



Photos 9 and 10. Water sampling valve attached to pH and Temperature monitoring station; Conductivity and pH meters



WATER ANALYSIS REPORT

301-721-BOND

PAGE 1 of 1

630 E. Diamond Ave. Suite J/K, Gaithersburg, MD 20879

CUSTOMER The Kennedy Center		DATE 9/1/16		TIME IN		TIME OUT	
ADDRESS 2700 F St NW				WATER TREATMENT SPECIALIST Paul Miller			
CITY Washington		STATE DC	ZIP		COPIES TO		
ATTENTION:		TITLE:					
RECOMMENDATIONS / REMARKS							
<p>Main Cooling Water – The system is still in mechanical cooling. The pH is in range & reading accurately. The pH sensor was cleaned & calibrated to maintain the accuracy of the unit.</p> <p>Chilled Water – The corrosion inhibitor residual is in range. Hot Water – The corrosion inhibitor residual is in range. The BOND 5012 feed rate was reduced slightly (from 4 to 3 strokes/pump)</p> <p>Boiler #1 – The boiler is off at this time. Boiler #2 – The boiler is off at this time. Boiler #3 – The boiler is off at this time.</p>							
TEST RESULTS	TDS	ALKALINITY		HARDNESS		SULFITE	2353
WATER SAMPLE	umhos	P/pH	M	OH	TOTAL	CALCIUM	as Na ₂ SO ₃
Recommended MINIMUM							NaNO ₂
Control Ranges MAXIMUM							600
Main Cooling	362	8.22	83		121	71	1200
Meter	-	8.21	-		-		-
Chilled Water	2800	10.9					1250
Hot Water	3602	10.1					1400
Recommended MINIMUM	5500	400	800	400		40	
Control Ranges MAXIMUM	Max	600	Max	Max		80	
Boiler #1 MER 5N	Off	-	-	-		-	
Boiler #2 MER 5S	Off	-	-	-		-	
Boiler #3 MER 3	Off	-	-	-		-	
Make Up Water							
CHEMICAL PRODUCTS INFORMATION				Settings & Meters –			
TREATMENT PRODUCTS	PUMP SETTINGS	Inventory		The water softeners are off for the summer			
Boiler Water Treatment		90 gallons					
Closed Treatment		50 gal		Water Softeners: #1-N/A ppm / #2 – N/A ppm/ #3 –0 ppm			
Salt		20 Bags		SYSTEM EQUIPMENT CONDITION –			
				Pump settings: Hot 3 pulses-Chilled 9 pulses			
				The pumps are working well			
SERVICED BY Paul Miller							

Photo 11. Copy of September calibration report from Bond Technologies for effluent monitoring system.



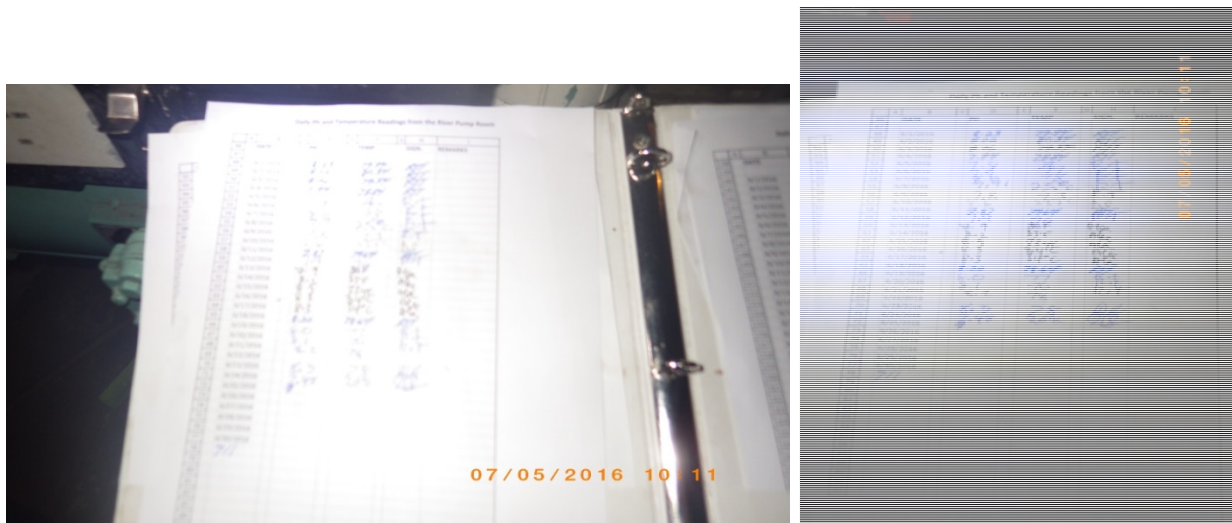
Photo 12. Influent Monitoring Location. Note the plastic sampling bucket next to the ladder used to collect samples



Photo 13. View inside the influent monitoring location.



Photo 14. pH and temperature measuring device used by the facility



Photos 15 and 16. pH and Temperature Log for June and July

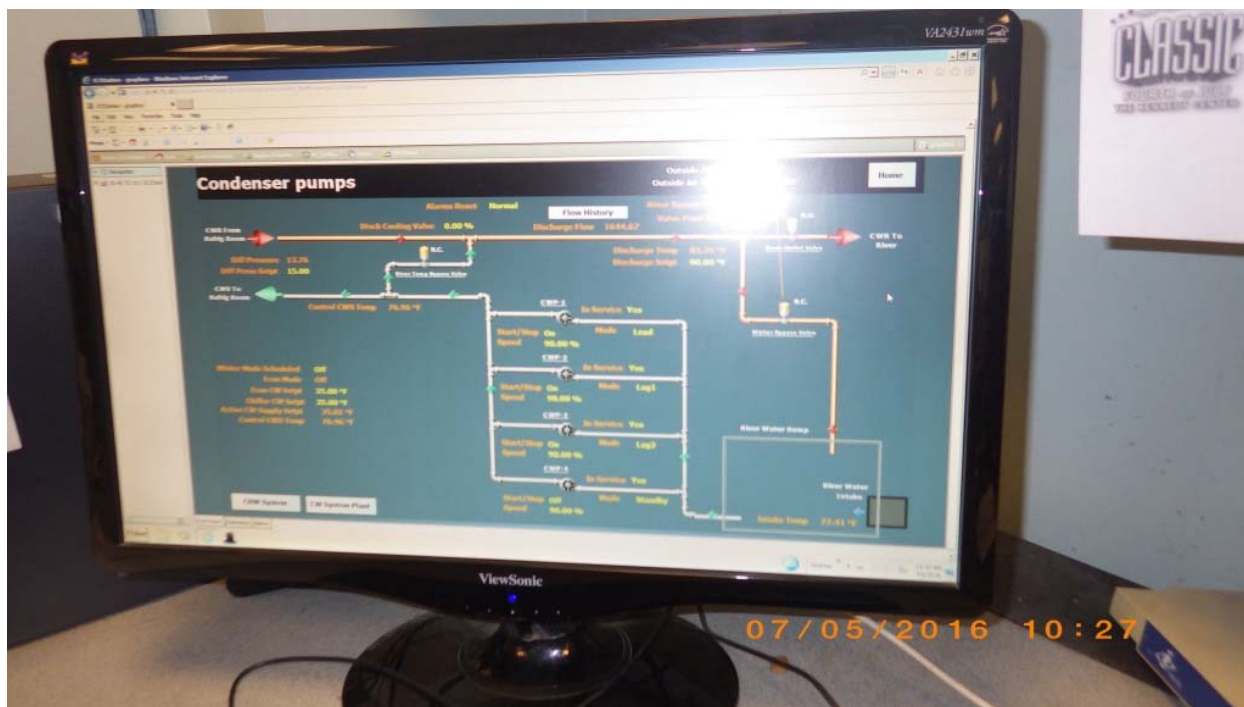


Photo 17. Real-time computer monitoring of pH, temperature, and flow.



Photo 18. Kennedy Center effluent discharge location.